

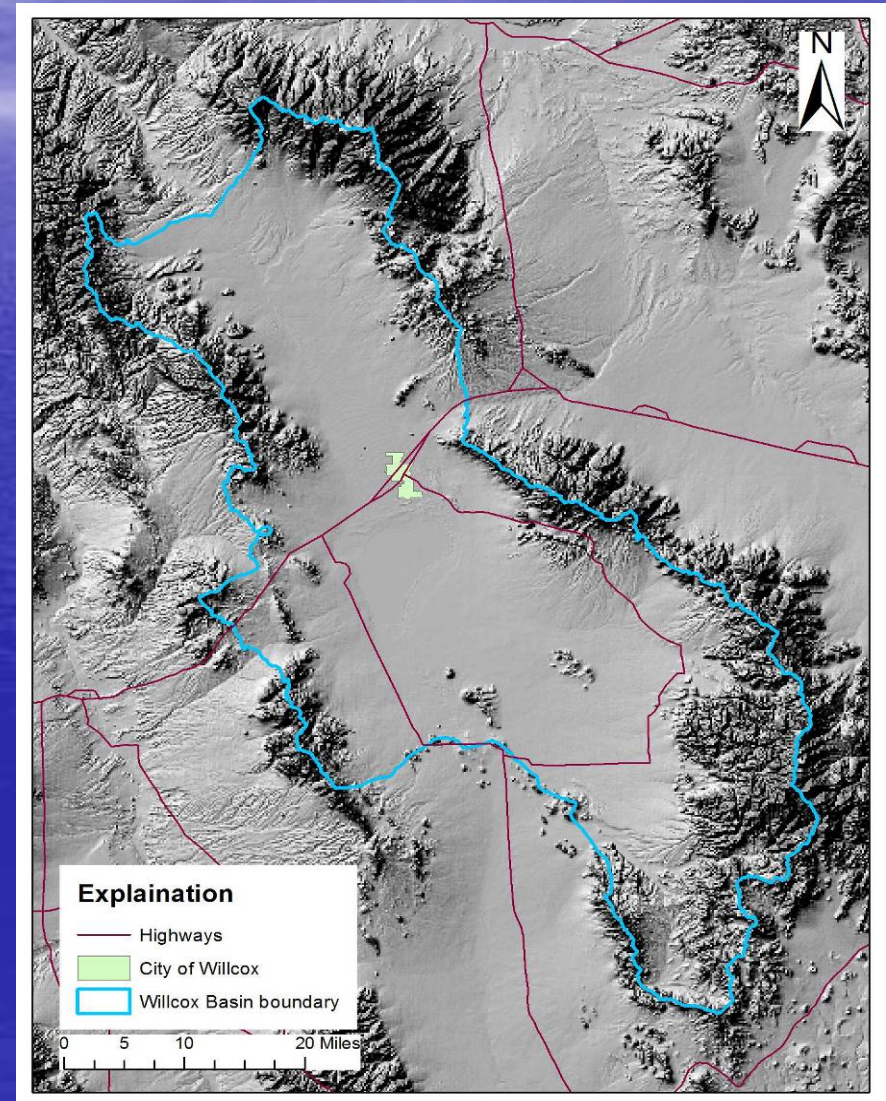
Willcox Basin

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The Willcox Basin

- Drainage area – 1,660 mi²
- Topographically closed
- Average precipitation:
 - 12 in/yr on valley floor
 - 35 in/yr in mountains
- Recharge along mountains
- Discharge at playa

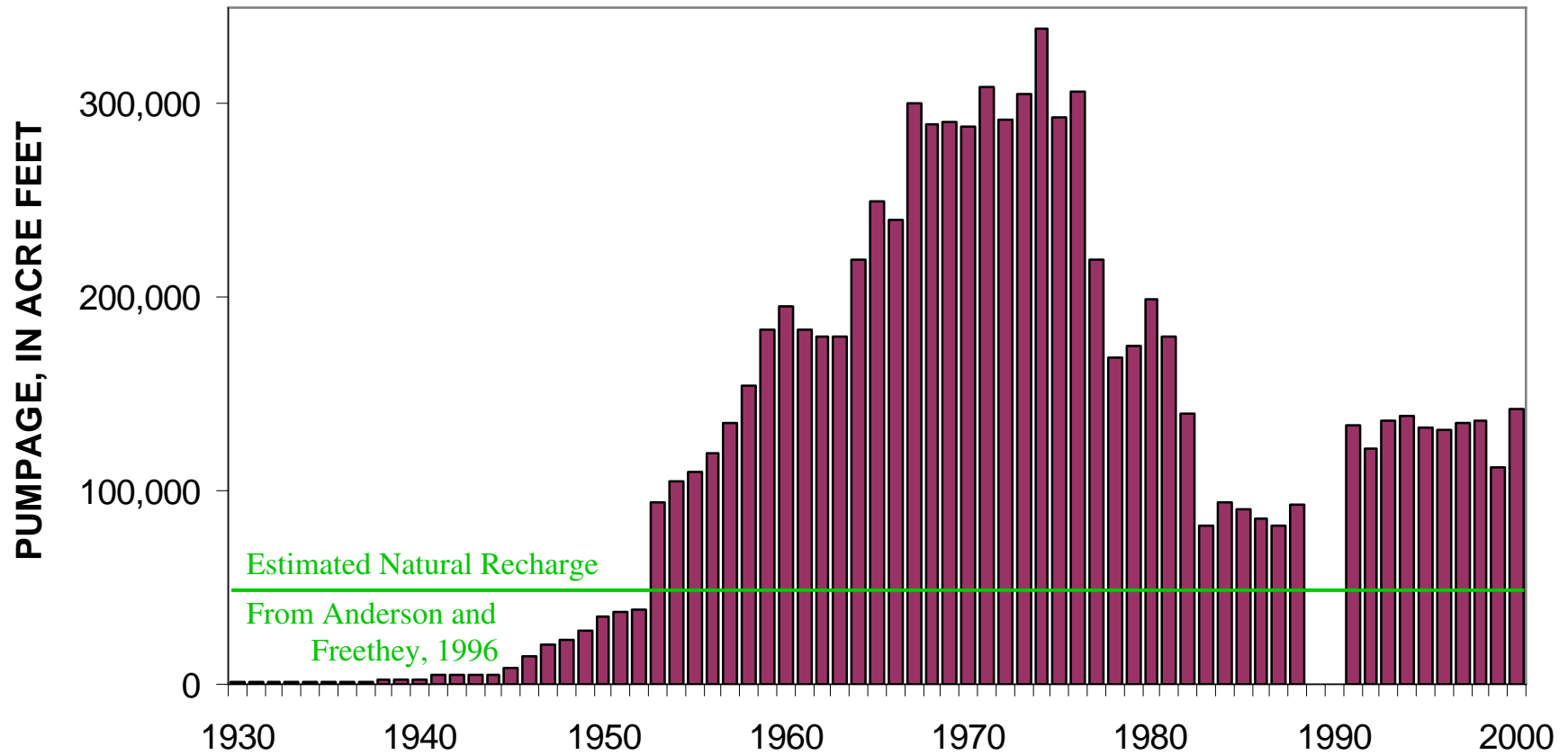


Primary Water Use Categories

- Agriculture
- Industrial (power plant)
- Mining
- Municipal

Pumpage

Annual Ground-Water Pumpage in the Willcox Basin



Ground-Water Budget – Development - 1974

$$\text{Inflow} = \text{Outflow} +/\text{- Storage Change}$$

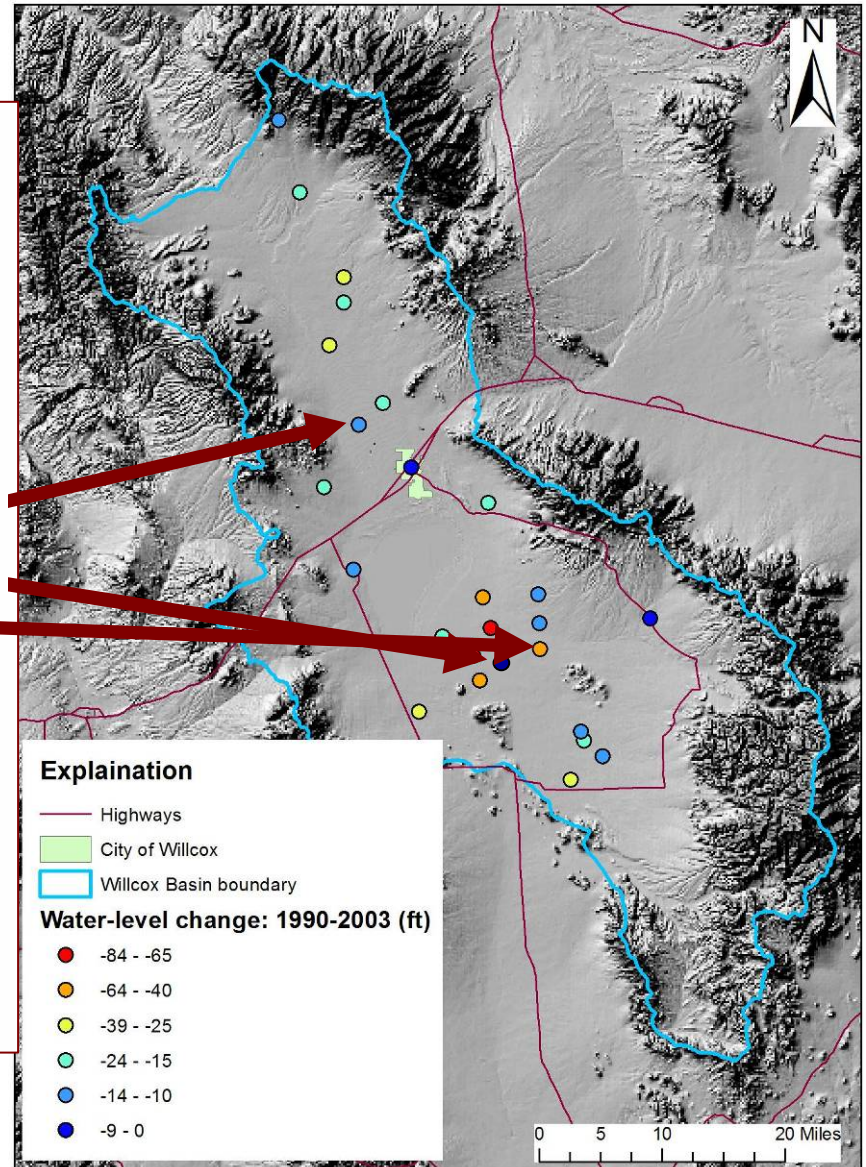
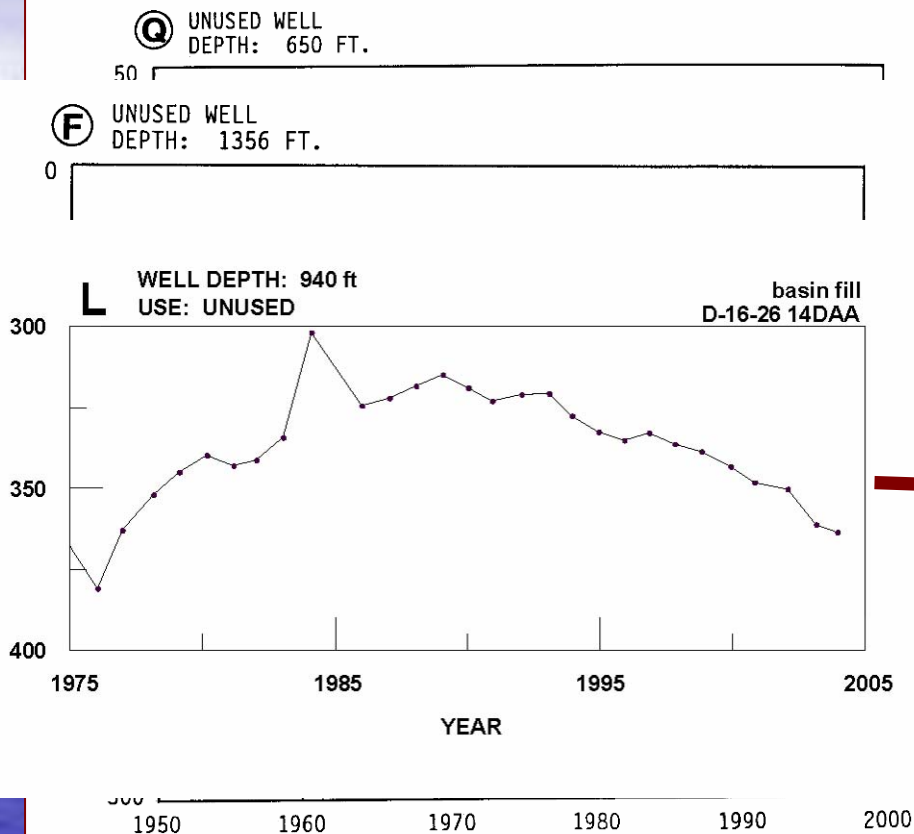
- Willcox development condition, 1974 – from model:
 - Estimated natural recharge = 47,000 acre-feet/year
 - Estimated natural discharge = 650 acre-feet/year
 - Pumpage = 243,500 acre feet
- Estimate of storage change =
 - 197,150 acre-feet/year

Ground-Water Budget – Development - 2000

$$\text{Inflow} = \text{Outflow} +/\text{- Storage Change}$$

- Willcox development condition, 2000 - extrapolated:
 - Estimated natural recharge = 47,000 acre-feet/year
 - Estimated natural discharge = 650 acre-feet/year
 - Year 2000 pumpage = 143,000 acre feet
- Estimate of storage change =
 - 96,650 acre-feet/year

Water-Level Changes



Summary

- Pumping captures water that would otherwise discharge
- Willcox basin natural recharge about 47,000 ac-ft/yr
- 2000 pumpage about 143,000 ac-ft/yr
- Estimated 2000 annual storage loss about 95,000 ac-ft/yr